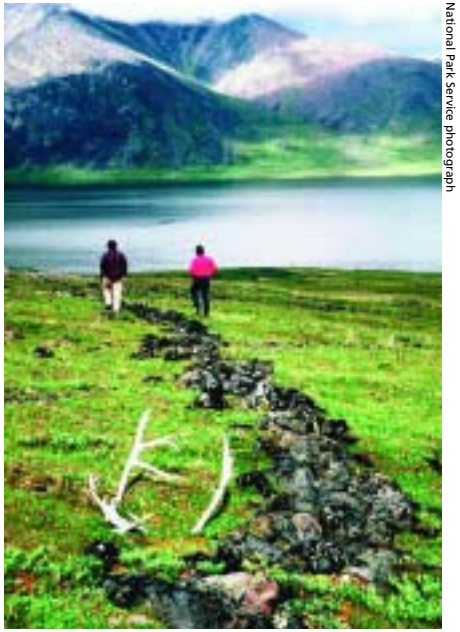

PAKBOATS



National Park Service photograph

Visitors are attracted to Gates of the Arctic for its wilderness character, part of which is evidence of native culture like this caribou surround.

Many visitors choose float trips in Gates of the Arctic National Park and Preserve. This often entails using inflatable or collapsible boats brought in by airplane.

National Park Service photograph

Social Science in Gates of the Arctic National Park and Preserve

By Don Pendergrast

Introduction

In April of 2001, I attended a Wilderness Recreation Estimation Workshop in the National Park Service Regional Office in Anchorage. The workshop, presented by the Aldo Leopold Wilderness Research Institute and U.S. Forest Service, was well attended by representatives of the National Park Service (NPS), U.S. Fish and Wildlife Service, Bureau of Land Management, Alaska Department of Fish and Game, and Alaska State Parks. It did not take long to understand one fundamental truth: no one had more than an educated guess as to what was occurring in Alaska's backcountry. The problem was clear — Alaska is big; backcountry use is often remote and dispersed; and while the visitor numbers are small, the numbers of backcountry managers are considerably smaller. This situation is what makes Alaska parks so unique.

Alaska National Parks are huge, containing intact ecosystems and remote wilderness. Our natural resource specialists study the earth, water, wind, and fire. We have excellent inventory and monitoring programs, which study the flora and fauna. Our cultural resource specialists document ancient and recent histories and relationships with the land.

In light of this, there is a surprising lack of emphasis on visitor studies, even of the most rudimentary information: the numbers of visitors and recreational use patterns. A notable exception is that the NPS keeps good records for front country use. We know how many people attend the slide show at the visitor center and whether or not they are satisfied with our services and facilities. Unfortunately, we have limited knowledge of our backcountry use, and it is this extensive backcountry that separates Alaska parks from their often smaller counterparts in the rest of the U.S.

Some reasons for this were stated above, but often, the use is so small there are few visible impacts and no apparent crisis. It is possible however that the quality of backcountry experiences cannot be gauged best by physical impacts but instead by social factors. If that is the case, what are those social factors, are they similar to non Alaska parks, and what effects do management actions have upon those factors?

Park management is enhanced by good information and accurate data. In order to adequately manage and maintain high quality backcountry experiences, the NPS needs to identify: 1) basic visitor information — who the visitors are and how many there are; 2) recreational use patterns — where visitors go, how long they stay, and what they do; 3) visitors' motivations and expectations; 4) visitors' experiences and the factors influencing those experiences; and 5) visitor and commercial service providers perceptions of managers and management decisions.

At Gates of the Arctic National Park and Preserve, five studies and one report document the social science work carried out *(Christensen and Watson 2002, Christian 2003, Dear 2001, Glaspell et al. 2002, Vande*

National Park Service photograph

Summer hikers in Gates of the Arctic need to be prepared for all kinds of weather. The Backcountry orientation for visitors goes a long way in promoting visitor safety, keeping expectations realistic, and enhancing wilderness experiences.

National Park Service photograph

Understanding recreational use patterns is critical for park management. Pingo Lake pictured here was once a popular access point for the Noatak River and suffered significant human impacts. Today most of those impacts are not noticeable because it is no longer a primary access point.

Kamp et al. 2000, Watson et al. 2003). This article summarizes these works and synthesizes them into a coherent but general form.

Basic information about visitors

Approximately 70-80% of Gates of the Arctic visitors are male, in their early to middle 40s, and college-educated. Over 90% are caucasian, and more than 75% are not from Alaska. As many as one-third of these visitors did not have a great deal of previous wilderness experience, and over 80% of them were visiting the park for the first time *(Christensen and Watson 2002, Christian 2003, Dear 2001, Watson et al. 2003)*.

Recreational Use Patterns

The park attracts few casual visitors. Typically, the length of stay is over ten nights, 3.5 people is the average group size, and floating is more popular (over 60%) than backpacking. About one-third of the visitors take guided trips. The Noatak River receives the most use, but other popular destinations are the Arrigetch Peaks, the North Fork of the Koyukuk River, the John River, and the Alatna River *(Watson et al. 2003)*. The rates for encountering other visitors are fairly low. The exception is on the Kobuk River during hunting season where the average is 5.8 encounters per trip, which is much higher than the 1.7 per week reported on the Noatak River *(Christensen and Watson 2002, Christian 2003)*.

Visitor motivations and expectations

Visitors chose to travel to Gates of the Arctic for its wildness, wildlife, remoteness, solitude, scenic beauty, lack of human features and signs of modernity, and for the mystique of the Brooks Range and the Arctic *(Christensen and Watson 2002, Christian 2003, Dear 2001)*. These visitors expectations were not met and visitors were disappointed if they saw large groups, saw or heard motorboats or aircraft, and especially if they did not see wildlife or at least signs of wildlife *(Watson et al. 2003)*.

Visitor experiences and factors of influence

Analysis of the visitor responses identified five general dimensions to the "Gates of the Arctic experience": taste of the Gates, freedom from management restrictions, untrammeled wildlife, challenge of access, and risk and uncertainty. The "taste of the Gates" emphasizes identification with management, other visitors, and the uniqueness of arctic wilderness experiences. Aspects of this "taste" included: feeling that managers were doing a good job at protecting wilderness qualities; being concerned with their own impacts and that the visit related to personal values; feeling far from civilization, being "free from the clock"; perhaps being the first visitor to some places; and feeling that the landscape is big.

For 98.5% of the visitors, "taste of the Gates" was a feature of the Gates experience. Ninety-three percent of the visitors viewed "freedom from management restrictions" as an aspect. Almost 95% of the visitors identified wildlife as a component of the experience. "Challenge of access" and "risk and uncertainty" (58.5% and 32.5% respectively) were not as commonly listed as part of the Gates experience.

For each dimension, factors that influ-

Dimension		Influence Factor	Pos or Neg
Taste of Gates (98.5%)	⟵	Management interaction	+
	⟵	Trust in NPS	+
	⟵	Interaction with park employees in backcountry	+
	⟵	Personal use of airplane for access	+
	⟵	Limited availability of trip planning information	+
Freedom from Management Restrictions (93%)	⟵	Management interaction	+
Challenge of Access (58.5%)	⟵	Air flight influences	+
	⟵	Physical development by humans	–
Untrammeled Wildlife (94.5%)	⟵	Wildlife presence	+
	⟵	Physical development by humans	–
	⟵	Personal use of airplane for access	+
	⟵	Changing trip plans at last minute or during trip	+
Risk and Uncertainty (32.5%)	⟵	Management interaction	+
	⟵	Out-group interaction	–

Table 1. Factors influencing experience dimensions for recreational users in Gates of the Arctic National Park and Preserve.

enced them were identified. Factors that have a positive influence on the five dimensions of the Gates experience are fairly easy to understand. For example,"wildlife presence" will have a positive influence on "untrammeled wildlife" because that dimension is characterized by seeing wildlife. Influence factors are presented in Table 1 *(Watson et al. 2003)*.

Influence factors themselves had components. The five components of the "management interaction" influence factor include: receiving a backcountry orientation from a park ranger, registering with the NPS, receiving information about Leave-No-Trace techniques, interaction with park employees in the office or town, and availability of free bear-resistant food storage containers from the NPS *(Watson et al. 2003)*.

Understanding the experience dimensions and the factors that influence them will allow the park to improve management policies to influence the visitors' experiences in a positive manner. Not only do the elements of "management interaction" positively influence visitors' experiences but they may also serve as indicators for other experience dimensions *(Pendergrast 2003, Watson et al. 2003)*.

Visitor Groupings

Depending upon the types of experiences reported, visitors were grouped based on their relationship with the park and wilderness in general. Four visitor groups emerged (Figure 1): low wilderness character (8%); high freedom, low risk and uncertainty (22%); high freedom, high wildlife, low challenge (39%); and high wilderness character (31%). The "high wilderness character" segment agreed positively with all the experience dimensions and stands out as a group of people reporting experiences in line with the purpose and intent of the park *(Watson et al. 2003)*.

Useful information for managers

Visitors and commercial service providers were asked to evaluate the obtrusiveness of ten different management techniques and their level of trust in the NPS. The commercial service providers were asked to "answer the questions based on how you think the listed management techniques would influence your clients' future experiences and conditions at Gates" *(Watson et al. 2003)*.

Visitor evaluation for potential management techniques is clear. Both visitors and operators agreed that mandatory backcountry orientation would have a positive effect on future experiences and conditions

National Park Service photograph

A kayaker contemplates the beauty of Gates of the Arctic.

The effort put into visitor contact is perhaps the single most important management action with regard to protecting wilderness character and providing excellent wilderness recreational opportunities.

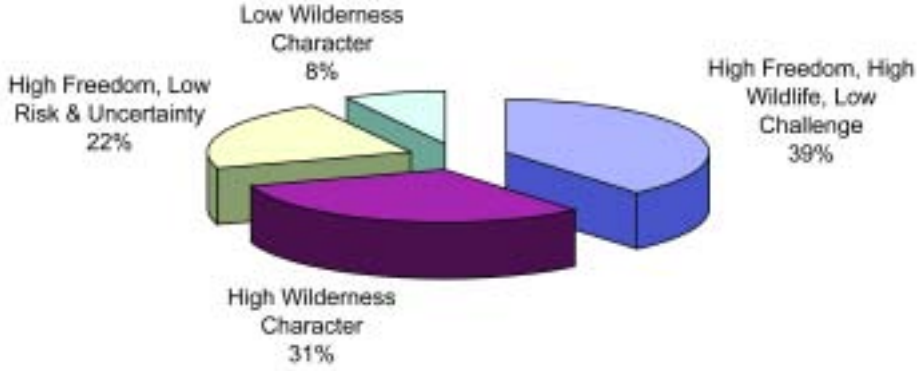


Figure 1. Visitor segments depend upon the types of experiences visitors reported.

National Park Service photograph

Backcountry orientation stresses Leave-No-Trace principles to minimize human impacts. In the arctic these impacts are long lived. This social trail photographed in 2002 at Walker Lake was made in the late 1960s.

at the park. Visitors indicated positive support for registration, use of bear-resistant food containers, group size limitations, advanced reservation limited permit system, restrictions on length of stay in one spot, and alterations to mitigate human impacts. The responses by the commercial service operators generally track those of the visitors, but are shifted toward the more negative portion of the scale. All segments of park visitors trust the NPS. Trust in the NPS is positive but low among commercial service providers *(Watson et al. 2003)*.

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) created ten new national parks and added 5.9 million acres to existing units. ANILCA provided for customary and traditional subsistence uses by local rural residents on these lands, many of them designated Wilderness. This subsistence activity is a profound difference in ANILCA Wildernesses as compared to other Wilderness-designated areas, where hunting, gathering, and access for subsistence activities are not allowed. It seems to confound managers, researchers, and academics *(Vande Kamp et al. 2001)*. Visitors seldom encounter subsistence activities or evidence, though, most have a positive view of subsistence and would enjoy witnessing subsistence activities and encountering local residents *(Watson et al. 2003, Dear 2001)*. Noise, particularly motorboat noise, was a significant detractor from the Gates of the Arctic experience *(Christensen and Watson 2002, Christian 2003)*.

National Park Service photograph

Remoteness, solitude, and a sense freedom in a large landscape are key elements in the Gates of the Arctic experience.

Conclusions

The effort put into visitor contact is perhaps the single most important management action with regard to protecting wilderness character and providing excellent wilderness recreational opportunities. Through the studies, managers learned that support for limits is not strong, even if visitor use levels increase thereby causing a decrease in the quality of the Kobuk River hunting experience *(Christensen and Watson 2002)*.

The purpose and intent of Gates of the Arctic, as defined by authorizing legislation and management plans, is most closely aligned with the experiences of the "high wilderness character" visitor group which is 31% of all visitors. This segment could thus be seen as an indicator group or keystone group, in the same vein as indicator species or keystone species are noted by ecologists. Learning how to identify this group and understanding their experiences may be critical for managing and maintaining Gates of the Arctic's place on the primitive end of the wilderness spectrum *(Pendergrast 2003, Watson et al. 2003)*.

National Park Service photograph

Visitors chose to travel to Gates of the Arctic for its wildness, wildlife, remoteness, solitude, scenic beauty, lack of human features and signs of modernity, and for the mystique of the Brooks Range and the Arctic.

Above: Spring in the Brooks Range offers plenty of daylight and relatively mild temperatures. It is free from mosquitoes, hiking across tussocks, and crowds. For some it is the perfect season.

Right: The Upper Alatna is typical of the broad glaciated valleys that are the principle routes of travel in Gates of the Arctic.

National Park Service photograph

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